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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/740,584	12/18/2000	Jeffrey Morgan Alden	GP-301022	6367
7590 12/31/2007				
General Motors Corporation Legal Staff Mail Code 482-C23-B21 P.O. Box 300 Detroit, MI 48265-3000				
		EXAMINER LEE, EUGENE		
		ART UNIT PAPER NUMBER 2815		
		MAIL DATE DELIVERY MODE 12/31/2007 PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

09/740,584

Applicant(s)

ALDEN ET AL.

Examiner

Eugene Lee

Art Unit

2815

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

In response to the remand filed 8/31/06, this following action (non-final rejection) is now pending.

#### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1 thru 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In lines 7, and 8, claim 1 recites the limitation "entities in the full model" in line 2. There is insufficient antecedent basis for this limitation in the claim.

In lines 7, and 8 of claim 1, it is unclear what "converting" actually occurs in the limitation "converting the calculation entities ... into temporary data entities" since calculation entities and data entities are both values. Appropriate clarification and/or correction are required.

Claim 1 recites the limitation "the calculations" in line 12. There is insufficient antecedent basis for this limitation in the claim.

Claim 1 recites the limitation "the size" in line 13. There is insufficient antecedent basis for this limitation in the claim.

Claim 2 recites the limitation "connecting arcs" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 3 recites the limitation "isolated cycles" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 7 recites the limitation "all global variables" in line 2. There is insufficient antecedent basis for this limitation in the claim.

These rejections are also reiterated for the other two sets of claims (i.e. claims 8-12, and 13-19) that also contain the same limitations, and therefore, subject to the same rejections above (i.e. connecting arcs in line 9 of claim 8, and etc.).

### *Claim Rejections - 35 USC § 101*

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 1 thru 19 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claims do not produce a concrete, useful and tangible result to form the basis of statutory subject matter. Claims 1-19 are drawn to a process that does nothing more than manipulate an idea, and do not claim a practical application.

The claims define non-statutory processes because they simply manipulate abstract ideas that have no **claimed** practical application. Mental processes- or processes of human thinking- standing **alone** are not patentable even if they have practical application. The Supreme Court has stated that "phenomena of nature, though just discovered, mental processes, and abstract intellectual concepts are not patentable, as they are the basic tools of scientific and technological work." Benson, 409 U.S. at 67. "If a claim is directed essentially to a method of **calculating**,

using a mathematical formula, even if the solution is for a specific purpose, the claimed method is non statutory. 437 U.S. at 595 (quoting *In re Richman*, 563 F. 2d 1026, 1030 (CCPA 1977)). The patent statute does not allow patents on particular systems that depend for their operation on human intelligence alone, and thus it is established that the application of human intelligence to the solution of practical problems is not in and of itself patentable.

A claim that involves BOTH a mental process and one of the other categories of statutory subject matter (i.e. a machine, manufacture, or composition) may be patentable under 101 (*Diehr*, 450 U.S. at 184); however, in this case, the claims only contain a mental process.

A claimed invention is directed to a practical application of a 35 U.S.C. 101 judicial exception when it:

- (A) “transforms” an article or physical object to a different state or thing; or
- (B) otherwise produces a useful, concrete and tangible result, based on the factors discussed below.

- ⇒ In this case, the CLAIMED invention does not transform an article or physical object to a different state or thing; or otherwise produce a useful, concrete and tangible result; and therefore, is not directed to a practical application.
- ⇒ If the specification discloses a practical application of a 101 judicial exception, but the claim is BROADER than the disclosure such that it does not require a practical application, then the claim must be rejected.
- ⇒ The tangible requirement does require that the claim must recite more than a 101 judicial exception, in that the process claim must set forth a practical application of that 101

judicial exception to produce a real-world result. Benson, 409 U.S. at 71-72, 175 USPQ at 676-77.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. In view of the 112 rejections above, claims 1 thru 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Moore et al. 5,630,127. Moore discloses (see, for example, FIG. 1) a method of analyzing a computer system (full system model) 100 comprising a database (sub-model as a collection of entities) 102, calculation entities/data entities (see, for example, column 4, lines 53-67), primitive values (temporary data entities; see, for example, column 2, lines 26-37), and value (size).

Regarding the limitation “converting the calculation entities in the sub-model that depend on entities in the full model that are not included in the sub-model into temporary data entities”, see, for example, column 4, lines 45-51 wherein Moore discloses files sent to GRMS from external sources (entities in the full model that are not included in the sub-model). Further, Moore discloses (see, for example, column 4, lines 62-67) that a calculation (i.e. calculation entities) is performed in the GRMS, and a long report to be created (temporary data entities) and routed to one or many people of the organization or no further action (calculation entities that do

not have an output to another entity). Moore discloses a result handler (visually analyzing changes) which has rules to follow for the disposition of the result.

### INFORMATION ON HOW TO CONTACT THE USPTO

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eugene Lee whose telephone number is 571-272-1733. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Parker can be reached on 571-272-2298. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Eugene Lee  
December 12, 2007



EUGENE LEE  
PRIMARY EXAMINER